

REMARKS

INTRODUCTION:

As set forth in the preceding section, claims 6 and 34 have been amended to correct typographical errors and not for reasons related to patentability. No new matter has been added. No claims have been added or cancelled herein.

Claims 1-37 are pending and under consideration. Claims 1, 6, 11, 16, 21, 26, 30, and 34 are independent claims. Reconsideration of the claims in view of the current amendments and the following remarks is respectfully requested.

REJECTIONS UNDER 35 USC § 103:

Claims 1, 4-6, 9-10, 21, 24-26 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,772,114 to Sluijter et al. ("Sluijter") in view of U.S. Patent No. 6,947,886 to Rose et al. ("Rose"). Claims 2-3, 7-8, 11-20, 22, 23, 27, 28 and 30-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sluijter in view of Rose and further in view of U.S. Patent No. 7,343,287 to Geiger et al. ("Geiger"). All rejections are respectfully traversed.

With respect to Geiger, in order to qualify as prior art under 35 U.S.C. §102(e)(1), a patent publication must have a filing date prior to the effective filing date of the application at issue. Consequently, with regard to the rejection of claims 2-3, 7-8, 11-20, 22, 23, 27, 28 and 30-37, Applicants assert that Geiger is not prior art with respect to the above-identified application, which obtains priority from Korean Patent Application No. 2003-14485 filed on March 7, 2003. Applicants have provided an English language translation of the Application with this response, along with a statement that the translation of the document is accurate. Accordingly, priority is perfected and the effective filing date of the above-identified application is March 7, 2003. Geiger was filed on August 7, 2003, and published on September 23, 2004, and consequently cannot be used as prior art with respect to the above-identified application under any of 35 U.S.C. §102(e)(1), 35 U.S.C. §102(b) or 35 U.S.C. §102(a).

Accordingly, Applicants respectfully submit that claims 2-3, 7-8, 11-20, 22, 23, 27, 28 and 30-37 are patentable over the cited documents.

Independent claim 1 recites at least the following:

bandwidth-extension-encoding the digital data, outputting bandwidth-limited data, and generating bandwidth extension information, wherein said bandwidth-extension-encoding includes receiving digital data, slicing off a portion of the digital data in a high frequency band with the remaining portion of the digital being bandwidth-limited data, and wherein the bandwidth extension information is information necessary for restoring the sliced portion of the digital data;

Applicants respectfully submit that the portions of Sluijter and Rose cited in the Office Action, taken alone or in combination, fail to suggest or disclose all of the above-recited features.

The Office Action asserts at page 3, item 5, that Sluijter, illustrates the above-recited “bandwidth-extension-encoding” at FIG. 1 where the Office Action asserts Sluijter illustrates “splitter 7 divid[ing] the digital data into a low-band and high-band data.”

Applicants respectfully disagree with the Office Action analysis and request reconsideration for at least the following reasons.

Sluijter is directed to an audio transmission system having a transmitter 1 in which an input signal is split up by splitter 7 into two spectral portions such that the low-frequency signal portion is coded by a regular narrow-band coder 9 while the high frequency portion is coded using a coder 11 that outputs LPC codes and signal amplitude codes (FIG. 1 and col. 2 lines 5-15). Referring again to FIG. 1, in Sluijter, the high-frequency range signal from splitter 7 is processed by the second coder (HFENC) 11 to generate LPC coefficients via an LPC analysis and are then transformed into LSFs that are vector-quantized (col. 2 lines 55-66 or col. 4 lines 7-30).

In contrast, in the above-recited embodiment, the bandwidth extension information is not the encoded high-frequency band signal, but instead refers to side information “necessary for restoring the sliced portion of the digital data” after slicing off the portion of the input digital data in a high frequency band. Consequently, there are significant differences between the bandwidth extension information as recited in claim 1 and the coded high-frequency range data provided to the transmission channel 3 in Sluijter.

In addition, the Office Action fails to establish that Rose compensates for the noted deficiencies of Sluijter.

Independent claim 1 further recites at least the following:

encoding the bandwidth-limited data into a hierarchical structure having a base layer and at least one enhancement layer so as to control a bit rate;

Applicants respectfully submit that the portions of Sluijter and Rose cited in the Office Action, taken alone or in combination, fail to suggest or disclose all of the above-recited features.

The Office Action notes at page 3, item 5, that Sluijter "fails to specifically disclose encoding the bandwidth-limited data into a hierarchical structure..." However, the Office Action proposes to modify Sluijter with Rose, and asserts that Rose compensates, at col. 5, line 50 through col. 6, line 48, for the noted deficiencies of Sluijter.

Applicants respectfully disagree with the Office Action analysis and request reconsideration for at least the following reasons.

The cited portion of Rose states in part:

The input to the enhancement-layer error (z) is not reconstructed (expanded) error in the original domain, but is compressed error z^* in the companded domain. This is indicated by the lack of any descaling function 48 and any expansion function 50 between the base-layer 52 * and the enhancement-layer 54 *

Thus, the above-cited portion of Rose mentions base-layer 52 * and enhancement-layer 54 * and further describes base and enhancement-layer rates at col. 6, lines 9-20 but fails to describe "encoding the bandwidth-limited data into a hierarchical structure ... so as to control a bit rate," as recited in claim 1.

Accordingly, Applicants respectfully submit that independent claim 1 patentably distinguishes over Sluijter and Rose, and should be allowable for at least the above-mentioned reasons. Since similar features recited by each of the independent claims 6, 11, 16, 21, 26, 30, and 34, with potentially differing scope and breadth, are not suggested or disclosed by Sluijter and Rose, the rejection should be withdrawn and claims 6, 11, 16, 21, 26, 30, and 34 also allowed.

Further, Applicants respectfully submit that claims 2-5, 7-10, 12-15, 17-20, 22-25, 27-29, 31-33 and 35-37, which variously depend from independent claims 1, 6, 11, 16, 21, 26, 30, and 34, should be allowable for at least the same reasons as claims 1, 6, 11, 16, 21, 26, 30, and 34, as well as for the additional features recited therein.

REQUEST FOR ENTRY IN ACCORDANCE WITH 37 CFR 1.116:

Entry of this Amendment in accordance with 37 CFR 1.116 is respectfully requested because the enclosed amendments comply with requirements of form expressly set forth in the previous Office Action and the amendments place the subject application in condition for allowance or present the rejected claims in better form for consideration on appeal.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: August 3, 2009

By: 

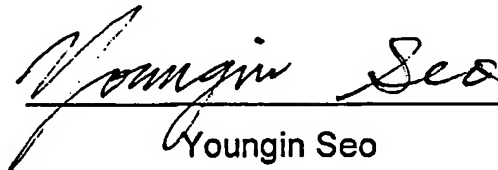
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CERTIFICATION OF TRANSLATION

I, Youngin Seo, an employee of Y.P. LEE, MOCK & PARTNERS of The Koryo Bldg., 1575-1 Seocho-dong, Seocho-gu, Seoul, Republic of Korea, hereby declare under penalty of perjury that I understand the Korean language and the English language; that I am fully capable of translating from Korean to English and vice versa; and that, to the best of my knowledge and belief, the statements in the English language in the attached translation of METHOD AND APPARATUS FOR ENCODING AND/OR DECODING DIGITAL DATA USING BANDWIDTH EXTENSION TECHNOLOGY (Korean Patent Application No. 10-2003-0014485 filed on 7 March 2003), consisting of 34 pages, have the same meanings as the statements in the Korean language in the original document, a copy of which I have examined.

Signed this 30th day of July, 2009



Youngin Seo